

URBAN DISTRICT OF FELIXSTOWE.

Annual Report of the Medical Officer of Health for the Year 1915.

TO THE CHAIRMAN AND MEMBERS OF THE FELIXSTOWE
URBAN DISTRICT COUNCIL.

GENTLEMEN,

I have the honour to present to you my Annual
Report for the year 1915.

VITAL STATISTICS.

Our vital statistics are again complicated by the abnormal conditions resulting from the prevalence of war and the military occupation of the district, the marked increase in the number of deaths and in the incidence of epidemic disease being chiefly due to these causes. 158 births were registered in the district, 87 males and 71 females. To these must be added three males and three females born to residents, temporarily living outside the

area, and one male must be deducted, the net total being 163, which gives a birth rate of 16.34 per 1,000. 186 deaths were registered in the district, but 60 of these (including 44 among the military) are assignable to other areas. We have to include, however, 12 deaths of residents who died outside the district, so that our net total is 138, giving a death rate of 13.84 per thousand. It will be noticed that both birth and death rates are lower than the rates for the whole country, which are respectively 21.9 and 15.1, but the difference in the last respect is unfortunately much less marked than usual. Our death rate is, in fact, the highest we have known for several years.

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note on
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The calculations by which these results are reached, are made upon a population basis of 9970 which is arrived at in the following way. The increase in the population between the census return of 1901 and 1911 is multiplied by a factor based on a study of the natural increase of population in England and Wales, and the result is added to the census population of 1911. The factor in question which is supplied by the Registrar General, is, .45,731,880, and varies from year to year.

Among children under one year of age, there were 28 deaths, which gives the abnormally high mortality rate of 171 per thousand births registered. Four of these deaths were in children of soldiers temporarily quartered here, but they are assigned to this district presumably because their parents have no settled permanent address. Even with this deduction, however, the rate would be 147 per thousand, a figure which is disconcertingly high

and compares most unfavourably with our rates in previous years which have always been well below the average. The general infantile mortality for the whole country is 110 per 1,000.

The deaths of non-residents certified in the district may be summarized as follows :—

DISEASE.	AGES.							TOTAL.
	0-1	1-2	2-5	15-25	25-45	45-65	65 and over	
Pneumonia		1	1	5	2			9
Bronchitis			1		1	1		3
Cerebro-spinal fever				10	4	1		15
Nephritis					3			3
Heart disease ..					5	3		8
Premature birth and congenital debility, etc. ..	1							1
Cancer					1		1	2
Accidents				1	2			3
Suicide				2	1	1		4
Diphtheria				3				3
Pulm. Tuberculosis					1			1
Other Tub. Diseases					1			1
Other Diseases ..				4	1		1	6
Alcoholism					1			1
Total	1	1	2	25	23	6	2	60

The Registrar General has requested that deaths of soldiers occurring in hospitals should be excluded from Table Column 6 of Table 1. I therefore append a separate summary of these deaths which are also included in the list immediately above.

DISEASE.	Age 15-25	Age 25-45	TOTAL.
Diphtheria	3		3
Phthisis		1	1
Other Tub. Diseases ..		1	1
Bronchitis		1	1
Pneumonia	4	1	5
Heart diseases		2	2
Accidents	1		1
Suicides	1	1	2
Nephritis		3	3
Cerebro-spinal fever ..	10	4	14
Alcoholism		1	1
Other diseases	3		3
Total	22	15	37

It will be noticed, as might be expected, that the majority of the deaths among soldiers occurred in hospital. The seven exceptions included two suicides, two deaths from accidents, and three sudden deaths from heart disease.

In the earlier part of the year we were confronted with simultaneous epidemics of Measles, German Measles, Scarlet Fever and Cerebro-spinal Fever.

Some cases of Measles occurred in the 10th Norfolk Regiment and the 11th North Lancashire Regiment. These cases were isolated in their billets, but the contacts were not immediately segregated and fresh cases continued to occur. Isolation of the contacts in their billets was not found practicable, and in February, the Suffolk Convalescent Home was taken for the segregation of contacts and the reception of cases.

The contacts soon became so numerous that the accommodation was seen to be inadequate, and some huts in the Mill Lane hutments were set apart for their reception. Attempt was also made to remove the fresh cases as they occurred by taking the temperatures of the contacts daily, and isolating in hospital those who showed a rise in temperature. Notwithstanding these precautions the cases soon became so numerous that the Suffolk Home became overcrowded, and fresh accommodation had to be provided. The difficulties were increased by the fact that a case of Scarlet Fever was accidentally admitted into the Suffolk Home, and an epidemic of Scarlet Fever broke out there, so that it became necessary to use it entirely for this disease, as the Isolation hospital proper was already over full. Two other houses were accordingly taken for cases of Measles and German Measles, St. John's School and St. Mary's Home, while a third house, The Sycamores, Walton, was used for the reception of convalescent cases of these two diseases. The last of these houses was taken on March 9th, and was continuously occupied until the middle of May.

During this time the Council's Isolation Hospital, to which a special Military annex had been added for the accommodation of 20 patients, was used for the reception of Cerebro-spinal Fever, Scarlet Fever, and Diphtheria, while two huts, each capable of accommodating 30 men were used for the reception of contacts from cases of Cerebro-spinal Fever. During the later part of the Spring, one of these huts was provided with beds and used for convalescent cases.

All the epidemics subsided before the end of May, and in the latter part of the year the incidence of infectious disease was very slight.

The epidemic of Cerebro-spinal Fever commenced on January 21st, reached its height in February and March, and had practically disappeared by the end of April, no Military cases being notified after the end of the latter month, though two sporadic cases occurred in the civilian population, on June 27th and July 6th, these having no apparent connection with any of the previous cases. The first cases were treated at the Cliff Military Hospital, but during February it was decided that they should be sent to the Isolation Hospital, where a Ward in the Military annex was set apart for their reception. The contacts were segregated in one of the huts specially built for the purpose, and were not allowed to return to duty until two successive cultivations from a naso-pharyngeal swabbing had failed to show the presence of the meningococcus. These swabbings were done by Dr. Mackarell, the pathologist appointed by the War Office for the Colchester district. The positive contacts were at first numerous in proportion to the total number, more than one-third, but towards the end of the epidemic a great diminution was noticeable.

Thirty-two cases of Cerebro-spinal Fever were notified, 23 of whom were soldiers. There were 14 deaths among the soldiers, and eight among the civilians, making a total of 22, and a mortality of 68 per cent. Strictly speaking, however, two of the notified cases should be excluded, as they were found to be wrongly diagnosed,

and if we accordingly reckon our total as 30, the mortality is 73 per cent. One civilian and 13 military patients were treated in the Isolation Hospital, including the two previously mentioned. Eight of the genuine cases died, *i.e.*, exactly two-thirds of the total number. The duration of the disease among the fatal cases, from the onset of symptoms until death, varied from eight hours in the shortest, to forty-six days in the longest, the average period being eighteen days.

Of the patients who recovered, the average stay in hospital was 56 days. All except one, who died before he could be seen by a doctor, were treated by lumbar puncture, more or less frequently repeated, followed by the injection of Flexner's serum. Soamin was used in seven cases including three of those who recovered.

For one patient, lumbar puncture was performed on ten occasions, and seven injections of serum were given ; he was a very bad and typical case, but made a complete recovery. No subsequent paralysis was observed in this or any of the other cases who recovered in the Isolation Hospital.

The characteristic rash was observed in about a third of the total number, including all those which were rapidly fatal.

Forty-three military and 26 civilian cases of Scarlet Fever were notified. Thirty-six were admitted to the Isolation Hospital, of whom 30 were soldiers. The only death from this disease was that of a soldier who contracted Lobar-pneumonia during the third week of his convalescence. The average stay in hospital of the

Scarlet Fever patients, who were in no case discharged until desquamation had ceased, was 58 days. The remainder of the notified cases, with a few exceptions, were treated in the Suffolk Convalescent Home.

Fifty-five cases of Diphtheria occurred in the district, 29 of whom were soldiers. The latter were all treated in the Isolation Hospital, and three died. Seventeen civilians were also treated in hospital, and of these, two died, one of whom was a laryngeal case, moribund on admission. Of the patients who recovered, the average stay in hospital was 26 days, an unusually short period, owing to the fact that in many, the disease was very mild in character. None were discharged until a bacteriological examination had proved the absence of diphtheria bacilli from their throats. The mortality of this disease in hospital was ten per cent.

One case of Enteric Fever was treated in hospital. The diagnosis in this case was not proved bacteriologically, and the Widal test was inconclusive as the patient had been protectively inoculated a few months before he was taken ill. The disease was very mild in character, and was most probably paratyphoid.

Five cases of Erysipelas were admitted, three of whom were soldiers. One of the civilian patients died.

Twenty cases of German Measles were admitted, all soldiers.

The remainder of the admissions include, ten cases of Tonsillitis sent in on suspicion of being diphtheritic, two cases of pharyngitis admitted for the same reason, three cases of Influenza, and one of Rheumatism, sent in

on suspicion of suffering from Cerebro-spinal Fever, three cases of Mumps, and one of Septic Glands, who was supposed to be suffering from the former disease.

The following table summarizes all the admissions during the year :—

	Military Patients.		Civilian Patients.		Total.
	Recoveries.	Deaths.	Recoveries.	Deaths.	
Scarlet Fever	29	1	6		36
Diphtheria ..	26	3	15	2	46
C.S. Fever ..	6	7		1	14
G. Measles ..	20				20
Tonsillitis ..	10		1		11
Pharyngitis ..	2				2
Erysipelas ..	3		1	1	5
Mumps ..	3				3
Septic Glands	1				1
Influenza ..	3				3
Enteric Fever	1				1
Rheumatism	1				1
Chicken Pox	1				1
Total ..	106	11	23	4	144

Owing to the inconvenient arrangement by which the financial year terminates on March 31st instead of December 31st, it is impossible to present a statement of expenses to correspond with the above summary, but I have obtained the figures for the financial year ending on March 31st, 1915, which are as follows :—

HOSPITAL EXPENDITURE.

APRIL 1ST, 1914 TO MARCH 31ST, 1915.

	£	s.	d.
Medical Superintendent's Remuneration for Visits	50	0	0
Rent of Pier House	21	0	0
Removal of Cases by Ambulance	37	2	6
Grocer	46	9	7
Butcher	32	14	11
Dairyman	30	8	9
Chemist	22	4	10
Baker	19	18	6
Fishmonger	10	3	8
Greengrocer	12	18	3
Lighting and Rental of Gas Cooker	13	11	0
Advertising for Staff, etc.	2	0	4
Furnishings, Utensils, Repairs, etc.	31	14	10
Materials consumed from Stock	1	14	10
Wages of Workmen	7	2	7
Carting by Contract	2	3	2
Coal and Coke	25	11	6
Nurses' Salary, Uniform and Laundry Allowances	52	16	0
Extra Nurse's Salary, Fares and Laundry ..	30	19	10
Charwoman and Servant	35	7	4
Telephone	9	15	0
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Total Expenses for year	£495	17	5
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During the twelve months corresponding with the above accounts, 93 patients were treated in the hospital, so that the total cost per patient was £5 6s. 7d. The average stay in hospital for all patients was 31 days, so that the expense per day for each patient works out at 3s. 5¼d., or £1 4s. 0¾d. per week. It will be noticed that this average includes every expense connected with the medical treatment, nursing, housing, boarding and carriage of patients. No rent, however, is paid for the Military annex, and the special Nurses engaged for the treatment of Cerebro-spinal Fever were paid by the War Office.

The untiring energy of the Matron, Miss Sparkes, and her efficient and economical management of the hospital are deserving of the highest appreciation.

WATER SUPPLY.

The Water Supply of the district, which is used by the majority of the civilian population and the military in temporary occupation, is from the deep well in Lower Trimley. The analyses of the water of which I append a recent report have always been satisfactory, and there is practically no chance of organic contamination.

The report alluded to is as follows :—

Saline Ammonia	..	..	Faint trace.
Albumenoid Ammonia	..	..	Trace.
Combined Chlorine	..	..	12.40.
Nitrogen as Nitrates	..	..	.36.
Nitrogen as Nitrites	..	..	Nil.

REMARKS. This water is of great organic purity and free from all trace of pollution. It is quite fit for drinking and general domestic purposes.

(Signed) W. LINCOLNE SUTTON,
County Analyst.

The supply for Landguard Fort from a well in Lower Walton, is also satisfactory, a recent report being as follows :—

Saline Ammonia	..	..	Nil.
Albumenoid Ammonia	..	..	Nil.
Combined Chlorine	..	..	3.80.
Nitrogen as Nitrates	..	..	.19.
Nitrites	..	..	Nil.
Hardness before boiling	..	..	15.20.
Hardness after boiling	..	..	3.90.

The high Chlorine content of the Main Water Supply is characteristic of many deep chalk waters, especially of

those which are situated near the Coast, and has nothing to do with sewage contamination. The contrast between the two analyses in this respect is very marked and is explained by the difference between the depths of the two wells.

DAIRIES, SLAUGHTER-HOUSES & BAKEHOUSES.

The dairies, slaughter-houses and bakehouses have been regularly inspected, and no fault has had to be found except in the case of the last. An outbreak of "Rope" appeared in bread supplied to the Troops during September, and two bakehouses were temporarily closed for thorough cleansing and disinfection. Suspicion attached to a batch of flour supplied by the Army Service Corps, and this batch was temporarily disused pending the result of investigations. As there were a few subsequent sporadic cases of Ropy bread, and sound bread was subsequently baked from the batch under suspicion, it is probable that the contamination with the germ of Rope occurred in the bakehouses. No cases have occurred for some time.

FOOD PURITY.

On one or two occasions it has been necessary to condemn some articles of food, but as a rule the food supplied by the Army Contractors has been excellent. On June 16th and 17th, a slight febrile epidemic, involving 44 men, occurred in the Lancashire Regiment. As the fever was accompanied by some sickness and diarrhœa, it was suspected that this may have been due to food poisoning, but investigation failed to furnish any proof, and it was finally decided that the symptoms were due to a mild catarrhal fever.

SANITARY WORK.

The following particulars of Sanitary work have been supplied to me by the Surveyor :—

Connections to Public Sewer ..	12
Connections to Surface water drainage	1
Nuisances abated	12
Rooms disinfected	80 in 47 premises
Privies emptied	6
Cesspools emptied	45
Inspections at Slaughter Houses, Bakehouses and Dairies ..	42
Rooms and huts disinfected at the request of the Military Authorities	356 in 145 places
Privies emptied at Billets	179
Cesspools emptied at Billets ..	505 times

Nine new houses have been completed in the district during the year. The amount of sanitary work is naturally much increased by the Troops quartered in the town and district, and at the beginning of the year, when the number of Troops was much greater than at present, and the sewage systems in the hutments of the Lancashire and Norfolk Regiments was not completed, it made very heavy demands upon the staff and plant available. During April, the hutments of these two Regiments were provided with a complete water carriage system for their sewage and waste water, and the work of the sanitary staff was thereby considerably diminished. There is, however, no fall for the sewage to its discharging place and it has to be pumped into rising mains by means of compressed air. The present pumping plant is capable of dealing with the sewage of a maximum population of 20,000, without allowing any margin for accidental entrance of storm water. It is thus obvious that it would not be desirable to tax the present plant to this limit. It has, therefore, been decided to instal another pair of

engines at the pumping station, and until this plant is working, it is not regarded as safe to connect the compressed air mains with the sewers and ejectors newly constructed for the hutments on Landguard Common.

REFUSE COLLECTION.

In the earlier part of the year, eight refuse carts were at work, collecting on an average $2\frac{1}{2}$ loads each, making a total of 20 loads a day. Latterly, owing to a diminution in the volume of refuse, seven carts only have been necessary, and these collect altogether about 17 loads a day. The refuse collection for the Military is a daily one, and for houses occupied by civilians it is twice a week.

Under normal conditions during Winter time, six men and three refuse vans are sufficient for the collection of refuse twice a week, and in Summer ten men and five vans, the hotels and larger boarding houses being visited three times a week.

The Refuse Destructor is capable of dealing with 20 tons of refuse daily, the remainder being carted to a heap on the marsh. The heap so made, now contains approximately about 2,000 loads. It is therefore urgently necessary to instal additional destructor plant. A new Refuse Destructor unit has accordingly been ordered, and is now nearly completed, but as the old unit requires relining and repairing before it can be used in conjunction with the new one, refuse will have to be deposited on the heap for some time to come.

The new machinery for extension of the Air-compressing Plant has not yet been delivered, and until it is installed it will not be advisable to connect the sewage ejectors of Landguard Common with the air mains.

There are 52 Military Latrines in the district, having a total of 873 night soil and urine buckets. These are

emptied nightly, excepting at a few outlying places used by Guards.

The excreta is buried in pits to a depth of about three feet, but not lower than the top soil layer.

Until the beginning of September, the Council employed a Sub-Contractor to remove part of the excreta and refuse, viz., that on Landguard Common, but since December 3rd, the Contractor has been discharged, and the Council is undertaking the whole of this work.

The extra sewage contributed by the Military occupation of the district is estimated as about 100,000 gallons daily, and at the present time 70,000 gallons are being discharged into the ejectors. The sewage from Landguard Common is carted away, the solid excreta being buried, and the remainder, including the waste water, emptied into the sewers.

The two bath-houses erected on Landguard Common cannot be used until the sewage system is connected with the mains.

In connection with the sewage already being pumped, there are twelve ablution rooms, with a total of 192 taps, and two bath houses each of which has accommodation for 60 men, there are, in addition, the necessary urinals and the sinks of the cook-houses and other offices.

The sanitary state of the Billets and hutments is now, for the most part, very satisfactory and very much better than during the Winter of last year. This is not entirely due to the diminution in the number of Troops, and the consequent reduction of overcrowding. The yards and surroundings of many of the Billets have been greatly improved by the work carried out by the Royal Engineers. The paving and gravelling of the yards in the Western Central part of the town, and to some extent in other parts has facilitated the work of keeping the interiors clean. Top ventilation has now been provided for all recreation rooms and canteens.

INSPECTION.

It has, of course, been impossible to carry out the house to house inspection required under the provisions of the Housing and Town Planning Act, 1909, as so many of the houses have been required for billets, but daily inspections are made and all practicable improvements insisted upon.

GENERAL HEALTH.

During the latter half of the year, the general health of the district has been very good, and the comparatively high death rate with the unusually large incidence of infectious disease can, no doubt, be accounted for by the overcrowding of billets which existed during January, February and March.

The most unfavourable feature of my Report is the exceptionally high rate of Infantile Mortality. This cannot be satisfactorily explained by the prevalence of War conditions, as the rate for the whole country, and even that of large towns, is decidedly lower.

Premature Births form about the usual proportion of the total, so that anxiety and distress of expectant mothers will not altogether explain it. There are six deaths from broncho-pneumonia, but none of these were notified as Measles. There were also two deaths from Cerebro-spinal Fever, and one from Nephritis. We can only hope that our statistical return in this respect will prove a non-recurring and unique exception.

In concluding, I must express my thanks to the Council, my Co-Officials, and to the Military Authorities, for their cordial and courteous assistance in my work.

I am, Gentlemen, Your obedient servant,

G. J. CONFORD, M.D.Oxon.,

Medical Officer of Health to the Felixstowe Urban District.

TABLE II.

FELIXSTOWE URBAN DISTRICT.

Cases of Infectious Disease notified during the Year 1915.

Notifiable Disease.	Cases Notified in Whole District.										Total Cases removed to Hospital.
	At all Ages.	At Ages—Years.								65 and upwards.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.		25 to 45.	45 to 65.			
					Civil	Milit'y	Civil	Milit'y			
Diphtheria (including Membranous croup)	55	1	6	17		24	2	5			
Erysipelas	7			1		1	1	2	1	1	
Scarlet fever	69		1	8	2	42	1	15			
Enteric fever	3					1	1	1			
Cerebro-spinal Meningitis ..	32	1	2	2		17	1	6	2	1	
Ophthalmia Neonatorum ..	1	1									
Pulmonary Tuberculosis ..	18				3		12		3		
Other forms of Tuberculosis ..											
Tonsillitis isolated on suspicion of Diphtheria											
Measles											
Pedicular rash—mistaken for measles											
Totals	185	3	9	28	5	85	18	26	6	2	

TABLE III. FELIXSTOWE URBAN DISTRICT.

CAUSES OF, AND AGES AT, DEATH DURING YEAR, 1915.

Causes of Death	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.								Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District.	
	All ages. 2	Under 1 year. 3	1 and under 2 4	2 and under 5. 5	5 and under 15. 6	15 and under 25 7	25 and under 45. 8	45 and under 65 9		65 and upwards 10
Measles	1					1				5
Whooping Cough	1	1		2	1			1		1
Diphtheria and Croup	5	1	1					2	1	1
Erysipelas	1			2	1	2				
Phthisis (Pulmonary Tuberculosis)	8									
Tuberculous Meningitis	1			2	1		1			1
Other Tuberculous Diseases	3							3	8	2
Cancer, malignant disease	11									
Rheumatic Fever	1				1					
Meningitis	7	2	1		1		1	1	1	15
Organic Heart Disease	5				1			1	4	3
Bronchitis	14	2	1				1			
Pneumonia (all forms)	16	6	4	2		1		2	2	5
Other diseases of respiratory organs	2								1	
Diarrhoea and Enteritis	3	3				2				
Appendicitis and Typhlitis	2									
Alcoholism										
Nephritis and Bright's Disease	6	1								2
Other accidents and diseases of Pregnancy and Parturition	1						1	1	4	1
Congenital Debility and Malformation, including Premature Birth	9	8			1					
Violent Deaths, excluding Suicide	4							2		2
Suicide	1									1
Other Defined Diseases	29	4		1				11	12	5
Diseases ill-defined or unknown	7							1	6	
All causes	138	28	7	9	6	6	8	28	46	48

TABLE IV.

FELIXSTOWE URBAN DISTRICT. INFANTILE MORTALITY DURING THE YEAR 1915.

Deaths from stated Causes in Weeks and Months under One Year of Age.

Causes of Death.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	Total under 1 Month.	1-3 Months.	3-6 Months.	6-9 Months.	9-12 Months.	Total Deaths under 1 Year.
Whooping Cough					1				1
Diphtheria and Croup								1	1
Meningitis		1		1				1	2
Bronchitis					1		1		2
Pneumonia (all forms)						2	2		6
Diarrhœa					1				1
Enteritis					1			1	2
Premature birth	6	2		8					8
Atrophy, Debility and Marasmus					1				1
Other causes			1	1	1	1	1		4
Totals	6	3	1	10	6	3	4	5	28

Net Births in the year { Legitimate .. 157
 Illegitimate .. 6

Net Deaths in the year { Legitimate, infants .. 28
 Illegitimate,